



# UNITED STATES PATENT AND TRADEMARK OFFICE

9m  
UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/813,289	03/30/2004	Joseph D. Laudano	(49535) 59684 CON	4538

7590 08/23/2004  
CUMMINGS & LOCKWOOD  
Attn: Anita Lomartra  
Granite Square, 700 State Street  
P.O. Box 1960  
New Haven, CT 06509-1960

EXAMINER

ROY, SIKHA

ART UNIT PAPER NUMBER

2879

DATE MAILED: 08/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

9/2

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/813,289	LAUDANO ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Sikha Roy	2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 July 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 24-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 24-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

The Preliminary Amendment, filed on July 23, 2004 has been entered and is acknowledged by the Examiner.

Cancellation of claims 1-23 has been entered.

### ***Specification***

The disclosure is objected to because of the following informalities:

Page 1 lines 2,3, the Cross-Reference to related application should be updated to give current status.

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o).

In claims 26 and 35 the limitation reciting the 'axial length of the second region is between 3.0 inches and 6.0 inches' does not have proper antecedent basis in the specification.

In claim 28 the limitation reciting 'the first central region has a length of between about 61 and about 65 inches' does not have proper antecedent basis in the specification.

In claim 33 the limitation reciting 'the grooves of the first central region have a depth of between about 0.05 inch and about 0.1 inch' does not have proper antecedent basis in the specification.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 24 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,777,702. Although the conflicting claims are not identical, they are not patentably distinct from each other.

Both claim 24 of instant application and claim 1 of U.S. Patent 6,777,702, essentially recite the same limitations comprising elongated vitreous tube having outer periphery and axially opposed first and second ends, first and second electrodes at two ends, coating on interior of the tube for emitting ultraviolet radiation when voltage is applied and plurality of regions defined along the axial length wherein the first region extends over predetermined first (central) portion of the axial length and helical groove path defining series of axially spaced apart grooves. Although claim 1 of U.S. Patent 6,777,702 is silent about ultraviolet radiation in tanning wavelength, it is well known in

the art (as evidenced by U.S. Patent 5,557,112 to Csoknyai et al.) that the radiation with wavelength in the ultraviolet range (short UVB 260-320 nm and longer UVA 320-400 nm) generates tanning effect.

Claims 29 – 32,34 and 38 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 2,3,12,13,14 and 23 respectively of U.S. Patent No. 6,777,702. Although the conflicting claims are not verbatim identical, claims 29,30,31,32,34 and 38 are anticipated by the claims 2,3,12,13,14 and 23 of U.S. Patent 6,777,702 respectively.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 24-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 4,591,958 to Lamboo, and further in view of U.S. Patent 3,988,633 to Shurgan et al..

Referring to claim 24 Lamboo discloses (Figs. 1,3 column 3 lines 4-39) a discharge lamp 3 for using in tanning application comprising elongated vitreous tube having outer periphery and axially opposed first and second ends, coating of luminescent layer 6 on the interior of the tube along the entire length for emitting

Art Unit: 2879

ultraviolet radiation in tanning wavelength (UVA radiation of 254 nm) during operation.

Although Lamboo is silent about the limitations of first electrode at the first end and second electrode at the second end and voltage applied across the first and second electrodes, these are inherent to a mercury vapor discharge lamp discharge lamp.

Lamboo does not disclose the outer periphery including plurality of regions defined along the axial length wherein the first region extends over a predetermined first central portion and has helical groove defining axially spaced apart grooves.

Shurgan in pertinent art low pressure discharge lamp discloses (Fig. 3 abstract, column 1 lines 26-35, column 3 lines 30-38) a lamp with central portion of axial length having helical groove path defining series of axially spaced apart grooves 50 and regions 22 with no grooves (undeformed envelope section) at each end of the envelope. Shurgan further discloses that the grooves permit a longer effective arc stream length in the envelope thereby increasing the wattage loading of the lamp have better recombination of mercury ions in the plasma with phosphor on the wall to improve efficiency.

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to modify the elongated tube of the discharge lamp of Lamboo have plurality of regions defined along axial length, first central portion having helical groove path defining axially spaced grooves as taught by Shurgan for increasing the wattage loading of the lamp have better recombination of mercury ions in the plasma with phosphor on the wall to improve efficiency.

Art Unit: 2879

Regarding claim 25, although Shurgan does not explicitly disclose first region having different intensity from second and third end regions, but Fig. 3 discloses first central region having grooves 50 and hence providing radiation with higher intensity than the second and third end regions of the outer periphery having no grooves.

Regarding claim 26 the selection axial length of second region between about 3.0 and about 6.0 inches is a design choice that depends on the desired illumination characteristics of the lamp.

Regarding claim 27 it is clearly evident from Fig. 3 that the first central region extends axially between the first and second electrode assemblies at the two ends.

Regarding claim 28 it would have been obvious to one of ordinary skill in the art that a tube length of approximately 72 inches would be required for a tanning bed for adult people. Regarding the selection axial length of first region between about 61.0 and about 65 inches is a design choice that depends on the desired illumination characteristics of the lamp.

Regarding claim 29 Shurgan discloses grooves in the first region are formed intersecting the tube axis at an acute angle.

Regarding claim 30 Lamboo discloses (Fig. 3 column 3 lines 19-25) a reflective coating 4 on the interior of the vitreous tube positioned radially inward and extending throughout the length of the tube.

Regarding claim 31 Lamboo and Shurgan disclose the limitations which are same as of claim 24 and additionally the limitation comprising the first central portion

having helical grooves having an intensity greater than the radiation emitted from the second end region.

Claims 32, 34,35,36,37 essentially recite the same limitations of claims 29,30,26,27 and 28 respectively and hence are rejected for the same reasons.

Regarding claim 33 Shurgan discloses (column 3 lines 27-30) depths of the grooves can be varied. Lamboo and Shurgan disclose the claimed invention except for the limitation of depth of the grooves between 0.05 and 0.1 inch. It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. It would have been obvious to one having ordinary skill in the art at the time the invention was made to select the depth of the grooves between 0.05 and 0.1 inch, since optimization of workable ranges is considered within the skill of the art.

Claim 38 recites the method of exposing a substrate to UV radiation emitting lamp with all the limitations of claim 24 and 25 and hence is rejected for the same reasons. It would be obvious to one of ordinary skill in the art at the time of invention to provide the substrate for exposing to the UV radiation emitting lamp and positioning the lamp in close proximity to the substrate for providing tanning of the substrate.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent 3,560,786 to Shurgan discloses lamp having grooves. U.S. Patent 5,216,323 to Baaten et al., U.S. Patent 5,565,685 to Czako et al.



Art Unit: 2879

ans U.S. Patent 6,494,901 to Doty disclose ultraviolet discharge lamp for tanning purpose.

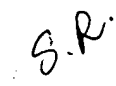
**Contact Information**

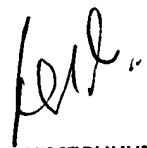
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sikha Roy whose telephone number is (571) 272-2463. The examiner can normally be reached on Monday-Friday 8:00 a.m. – 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar D. Patel can be reached on (571) 272-2457. The fax phone number for the organization is (703) 308-7382.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Sikha Roy  
Patent Examiner  
Art Unit 2879

  
NIMESHKUMAR D. PATEL  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800